AENEON
Simply advanced

Unbuffered Memory Module
Data Sheet

AXT660UD00-19D

XTUNE
Overclocking Series

This data sheet describes the features and specification of the AENEON™ XTUNE™ 512MB DDR2 1066 MHz overclocking memory module family.

XTUNE™ series is the AENEON™ solution for Enthusiastic Gamers striving for highest system performance while experiencing a fast, stable and reliable system operation.

AENEON™, with the XTUNE™ series, is the first company that supplies High Performance Memory Modules without overstressing the DRAM components with higher supply voltage. This will be paid back in higher lifetime and reliability.

AENEON™ XTUNE™ series supports the EPP (Enhanced Performance Profile) standard. EPP provides a Plug&Play solution and eases the use of overclocking modules significantly since the overclocking features can be read out by all motherboards[1)] also supporting EPP. As a result the system parameters are automatically adjusted to the overclocking parameters supported by the memory module. The most popular motherboards in the market supporting EPP are NVIDIA SLI 680i platforms.

Description

The 512MB single module can be organized as

- 64M x 64-bit DDR2-1066 based on 8 components 64M x 8-bit DDR2 FBGA components.

The single module is tested to run at 1066 MHz at a latency timing of 5-5-5-15 at the standard DDR2 voltage value of 1.8 V.

The Dual Channel Kit is coming with two identical modules tested together in DUAL CHANNEL MODE at 1066MHz at a latency timing of 5-5-5-15 on several platforms based on the NVIDIA 680i and Intel 965 chip set.

Package Variants

The AXT660UD00-19D comes in the following configurations:

Product Type	Density	General
AXT660UD00-19DM97-K(n)-1G	2x512MB (1GB)	Dual Channel Kit, n = regional versions

Features

- 512MB Memory Modules
- Overclocking Speed Grade DDR2-1066MHz CL5 at 1.8 V
- 240-Pin Dual Inline Memory Module (DIMM) with Gold Contact
- Highest Quality Heat Spreader for preventing critical operating temperatures
- Supports Industry Standard 800 MHz 5-5-5-15 (for non Overclocking operation)

1) Motherboard and BIOS have to support the EPP feature.In some Motherboard Model, EPP feature, has to be enabled in the BIOS settings. Refer to the Motherboard documentation for further details. All the other overclocking capable motherboards have to be manually configured using the parameters shown in the table.

Specification

Parameter	Standard	Overclocking
Clock cycle time t_{CK} for CL5	2.5 ns (min.) / 8 ns (max.)	1.87 (min.) / 8 ns (max.)
Activate to read/write delay t_{RCD}	12.5 ns (min.)	9.35 ns (min.)
Row cycle time t_{RC}	57.5 ns (min.)	37.4 ns (min.)
Refresh row cycle time t_{RFC}	105 ns (min.)	105 ns (min.)
Row active time t_{RAS}	45 ns (min.) / 70.000 ns (max.)	28.05 ns (min.) / 70.000 ns (max.)
Single power supply V_{DD} = V_{DDQ}	1.8 V ± 0.1 V	
Operating power I_{DD0}	0.7 W (max.)	
Module dimensions L x W x H	133.35 mm x 30.0 mm x 4.0 mm (max.)	
	5.25" x 1.18" x 0.16" (max.)	

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1. A failure of the AENEON Products can reasonable be expected to –directly or indirectly–
   a. Have a detrimental effect on such Critical Systems in terms of reliability, effectiveness or safety; or
   b. Cause the failure of such Critical Systems; or
2. A failure or malfunction of such Critical Systems can reasonably be expected to –directly or indirectly–
   a. Endanger the health or the life of the user of such Critical Systems or any other person; or
   b. Otherwise cause material damages (including but not limited to damages or serious injury to life or property, whether tangible or intangible).